

Emission Inventories

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October 21, 2015

Overview

- What is an Emission Inventory?
- Why do we collect emissions data from facilities?
- What is the National Emissions Inventory?
- What are some uses of Emission Inventories?

What is an Emission Inventory (EI)?

- An estimate of the emissions emitted from a process, facility, or defined region (i.e. study area, county, state, nation, etc.)
- Criteria (CAP) vs Hazardous (HAP) Air Pollutant
- Comprehensive vs Category Specific
 - Point, Nonpoint (i.e. area), Mobile, Biogenic, etc.
- Short-Term vs Long-Term

Emission Inventories Vary by Scope

- Permit Specific
- Regional / Statewide
 - Studies
 - Local / regional modeling & planning
- National
 - Regulation development
- Global
 - Global GHG policy



Why do we collect point source emissions data?

- Air Emissions Reporting Requirements (AERR)
December 2008 (amended February 2015)
 - National Emissions Inventory (NEI)
 - NATA; MACT Development; etc.
- §105 Federal Grant Commitments (include HAPs)
- CAA Title V Fees (Facility / Emissions Fee)
- Strategic Planning
 - SIP; Attainment Demo; etc.
- Permit Modeling Demonstrations

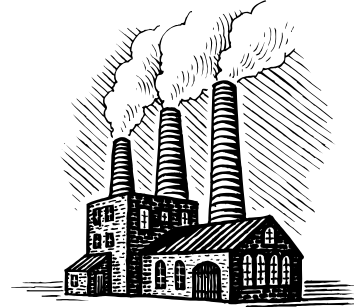


What is the National Emissions Inventory (NEI)?

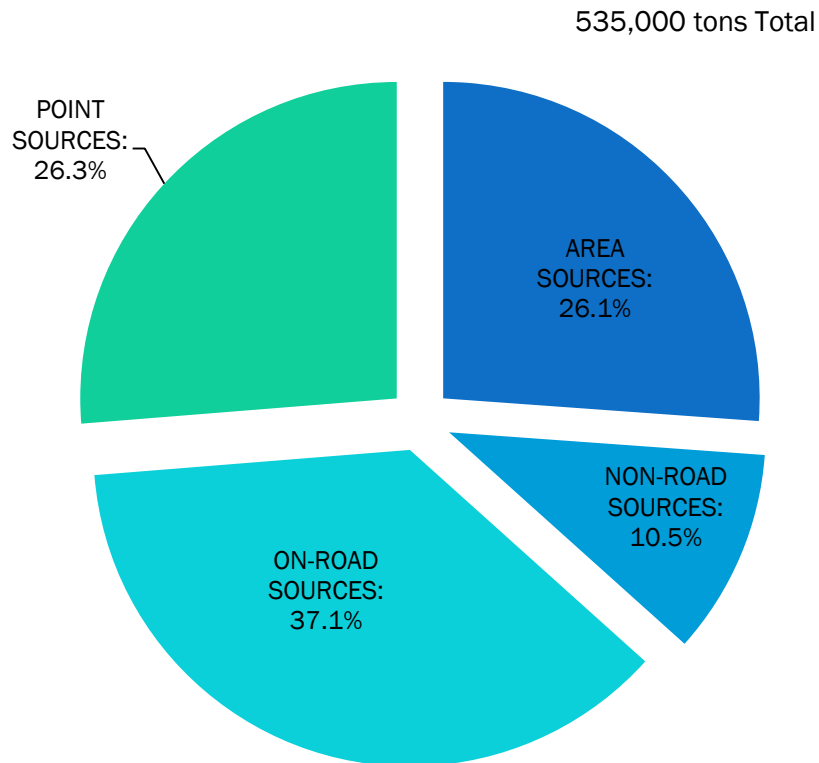
- “The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of both Criteria and Hazardous air pollutants from all air emissions sources.”
- Compiled pursuant to AERR
- Prepared by EPA every 3 years (2008, 2011, 2014, ...)
 - Uses data provided by State and Local agencies
 - Comprehensive (includes: point, nonpoint, mobile, etc.)

Comprehensive Emissions Inventory

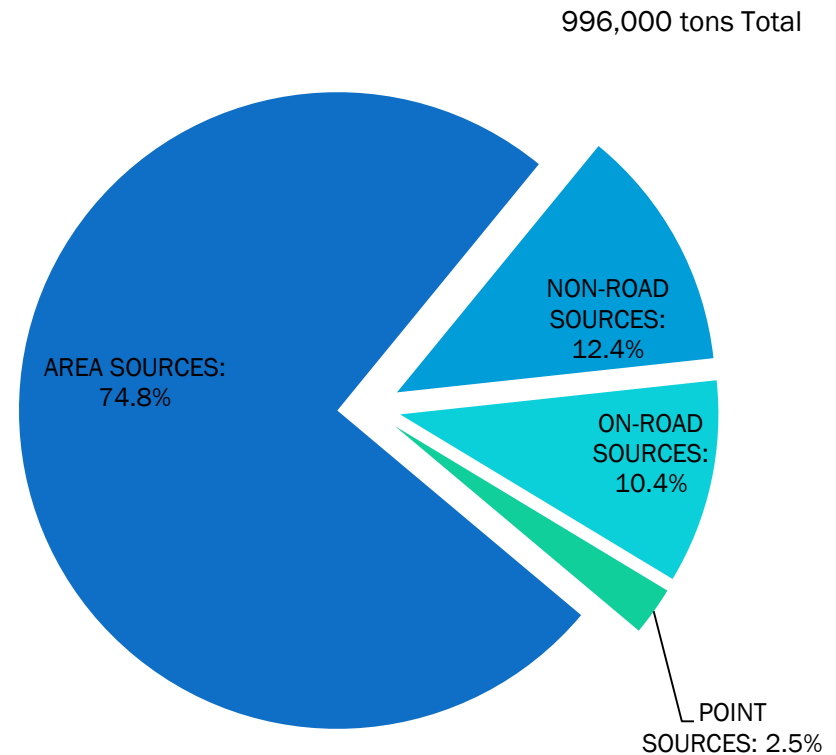
- Point Sources
 - Larger emitting facilities
- Mobile
- Stationary Area (Nonpoint)
 - Everything else
i.e. residential heating, solvent usage, biogenics
- Events
 - Wildfires



2011 Nitrogen Oxide Statewide Emission Estimates by Source Category



2011 Volatile Organic Compound Statewide Emission Estimates by Source Category



VOC

Emission Inventories Inform:

- State Implementation Plan submittals:
 - SO₂ nonattainment studies
 - Lead nonattainment / attainment plans
 - Regional Haze updates
- Photochemical modeling efforts
 - Past and Future Ozone attainment demonstrations
 - Future year EI projections (“modeling inventories”)
- Federal Regulation Development
- National Air Toxics Assessment

Resources

- <http://www.michigan.gov/deq/>
 - >Air >Emissions
 - Web Query Utility
 - Facility Emissions Query
 - Michigan Air Emissions Reporting System (MAERS) support
 - Reference tables (NAICS, SCC, etc)
- EPA Clearinghouse for Inventories and Emission Factors (CHIEF)
 - <http://www.epa.gov/ttn/chief/>
- EPA's Air Emissions Reporting Rule (AERR) 40 CFR 51 Subpart A
 - <http://www.epa.gov/ttnchie1/aerr/>
- InfoMAERS@michigan.gov
 - Questions / requests related to MAERS



Questions? Comments?